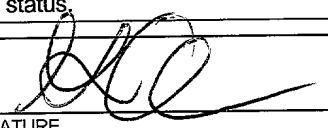


FORM PTO-1390 (Modified) (REV 5-93)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTORNEY'S DOCKET NUMBER	
TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371				016782-0235	
				U.S. APPLICATION NO. (If known, see 37 C.F.R. 1.53) Unassigned 09/890408	
INTERNATIONAL APPLICATION NO. PCT/EP00/01900		INTERNATIONAL FILING DATE March 6, 2000		PRIORITY DATE CLAIMED March 16, 1999	
TITLE OF INVENTION CANVASSES REINFORCED WITH METAL MEMBERS					
APPLICANT(S) FOR DO/EO/US Ludo ADRIAENSEN, Gerard VANDEWALLE					
Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:					
1.	<input checked="" type="checkbox"/>	This is a FIRST submission of items concerning a filing under 35 U.S.C. 371.			
2.	<input type="checkbox"/>	This is a SECOND or SUBSEQUENT submission of items concerning a filing under 35 U.S.C. 371.			
3.	<input type="checkbox"/>	This express request to begin national examination procedures (35 U.S.C. 371(f)) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and PCT Articles 22 and 39(1).			
4.	<input checked="" type="checkbox"/>	A proper Demand for International Preliminary Examination was made by the 19 th month from the earliest claimed priority date.			
5.	<input checked="" type="checkbox"/>	A copy of the International Application as filed (35 U.S.C. 371(c)(2))			
	<input checked="" type="checkbox"/>	is transmitted herewith (required only if not transmitted by the International Bureau).			
	<input checked="" type="checkbox"/>	has been transmitted by the International Bureau.			
	<input type="checkbox"/>	is not required, as the application was filed in the United States Receiving Office (RO/US)			
6.	<input type="checkbox"/>	A translation of the International Application into English (35 U.S.C. 371(c)(2)).			
7.	<input checked="" type="checkbox"/>	Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))			
	<input type="checkbox"/>	are transmitted herewith (required only if not transmitted by the International Bureau).			
	<input type="checkbox"/>	have been transmitted by the International Bureau.			
	<input type="checkbox"/>	have not been made; however, the time limit for making such amendments has NOT expired.			
	<input checked="" type="checkbox"/>	have not been made and will not be made.			
8.	<input type="checkbox"/>	A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).			
9.	<input type="checkbox"/>	An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).			
10.	<input checked="" type="checkbox"/>	A copy of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).			
11.	<input type="checkbox"/>	Applicant claims small entity status under 37 CFR 1.27 .			
Items 12. to 17. below concern other document(s) or information included:					
12.	<input type="checkbox"/>	An Information Disclosure Statement under 37 CFR 1.97 and 1.98.			
13.	<input type="checkbox"/>	An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.			
14.	<input checked="" type="checkbox"/>	A FIRST preliminary amendment.			
	<input type="checkbox"/>	A SECOND or SUBSEQUENT preliminary amendment.			
15.	<input type="checkbox"/>	A substitute specification.			
16.	<input type="checkbox"/>	A change of power of attorney and/or address letter.			
17.	<input type="checkbox"/>	Other items or information:			

U.S. APPLICATION NO. (If known, see 37 CFR 1.50) Unassigned 09/890408		INTERNATIONAL APPLICATION NO. PCT/EP00/01900		ATTORNEY'S DOCKET NUMBER 016782-0235	
18. <input checked="" type="checkbox"/> The following fees are submitted:				CALCULATIONS	
Basic National Fee (37 CFR 1.492(a)(1)-(5): Search Report has been prepared by the EPO or JPO.....\$860.00					
International preliminary examination fee paid to USPTO (37 CFR 1.482)\$690.00					
No international preliminary examination fee paid to USPTO (37 CFR 1.482) but international search fee paid to USPTO (37 CFR 1.445(a)(2))\$710.00					
Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO \$1,000.00					
International preliminary examination fee paid to USPTO (37 CFR 1.482) and all claims satisfied provisions of PCT Article 33(2)-(4)\$100.00					
ENTER APPROPRIATE BASIC FEE AMOUNT =				\$860.00	
Surcharge of \$130.00 for furnishing the oath or declaration later than 20 Months from the earliest claimed priority date (37 CFR 1.492(e))					
Claims	Number Filed	Included in Basic Fee	Extra Claims	Rate	
Total Claims	20	-	20	= 0	× \$18.00
Independent Claims	1	-	3	= 0	× \$80.00
Multiple dependent claim(s) (if applicable)				\$270.00	
TOTAL OF ABOVE CALCULATIONS =				\$860.00	
Reduction by ½ for filing by small entity, if applicable.				\$0.00	
SUBTOTAL =				\$860.00	
Processing fee of \$130.00 for furnishing English translation later the 20 months from the earliest claimed priority date (37 CFR 1.492(f)).				+	
TOTAL NATIONAL FEE =				\$860.00	
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property +					
TOTAL FEES ENCLOSED =				\$860.00	
				Amount to be: refunded \$	
				charged \$	
<p>a. <input checked="" type="checkbox"/> A check in the amount of \$860.00 to cover the above fees is enclosed.</p> <p>b. <input type="checkbox"/> Please charge my Deposit Account No. <u>19-0741</u> in the amount of \$860.00 to the above fees. A duplicate copy of this sheet is enclosed.</p> <p>c. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. <u>19-0741</u>. A duplicate copy of this sheet is enclosed.</p>					
NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.					
SEND ALL CORRESPONDENCE TO:				 SIGNATURE	
Foley & Lardner Washington Harbour 3000 K Street, N.W., Suite 500 Washington, D.C. 20007-5109				NAME GLENN LAW	
				REGISTRATION NUMBER 34,371	

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Ludo ADRIAENSEN, et al.
Title: CANVASSES REINFORCED WITH METAL MEMBERS
Appl. No.: Unassigned
Filing Date: July 31, 2001
Examiner: Unassigned
Art Unit: Unassigned

PRELIMINARY AMENDMENT

Commissioner for Patents
Box CPA
Washington, D.C. 20231

Sir:

Prior to examination of the present Application, Applicants respectfully request that the above-identified application be amended as follows:

IN THE CLAIMS:

Please note that these claim amendments assume entry of the annexes to the International Preliminary Examination Report.

In accordance with 37 CFR §1.121, please substitute for original claims 2-4, 7-17, 19 and 20 the following rewritten versions of the same claims, as amended. The changes are shown explicitly in the attached "Versions With Markings to Show Changes Made."

2. (Amended) A strip according to claim 1, whereby said primer layer comprises a thermosetting material.
3. (Amended) A strip according to claim 2, whereby said thermosetting material is selected from the group consisting of acrylate based resins, epoxy based resins or alkyd based resins.

4. (Amended) A strip according to claim 1, whereby said primer layer comprises a hot melt.
7. (Amended) A strip according to claim 1, whereby said thermoplastic material is polyvinylchloride.
8. (Amended) A strip according to claim 1, whereby said thermoplastic material is a polyvinylchloride compound.
9. (Amended) A strip according to claim 1, whereby said metal member is a flat wire with a tensile strength greater than 1500 N/mm^2 .
10. (Amended) A strip according to claim 1, whereby said metal member is a flat wire with a tensile strength greater than 1700 N/mm^2 .
11. (Amended) A strip according to claim 1, whereby said metal member is a flat wire with a thickness of less than 0.35 mm.
12. (Amended) A strip according to claim 1, whereby said metal member is a wire with a rounded I-profile.
13. (Amended) A strip according to claim 1, whereby said metal member is a steel wire with a carbon content of at least 0.40%.
14. (Amended) A strip according to claim 1, whereby said metal member comprises at least two metal members.
15. (Amended) A strip according to claim 14, whereby the metal members are located parallel in the plane of the strip, each metal member being in contact with at least one other metal member.
16. (Amended) A strip according to claim 1, whereby the metal member is coated with a zinc layer or with a zinc alloy layer.

17. (Amended) A fabric (10) for reinforcement of canvasses having a plastic coating, said fabric comprising a warp (12) and a weft (14), at least one of the warp or the weft being formed by a strip according to claim 1.
19. (Amended) Use of a strip according to claim 1, for reinforcement of a canvass.
20. (Amended) Use of a fabric according to claim 17 for reinforcement of a canvass.

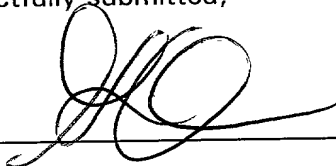
Applicants respectfully request that the foregoing amendments to Claims 2-4, 7-17, 19 and 20, be entered in order to avoid this application incurring a surcharge for the presence of one or more multiple dependent claims.

31 *GL*
Date July 27, 2001

FOLEY & LARDNER
Washington Harbour
3000 K Street, N.W., Suite 500
Washington, D.C. 20007-5109
Telephone: (202) 672-5426
Facsimile: (202) 672-5399

Respectfully submitted,

By



Glenn Law
Attorney for Applicant
Registration No. 34,371

VERSIONS WITH MARKINGS TO SHOW CHANGES MADE

1. A strip (16) for reinforcement of canvasses having a plastic coating, said strip comprises at least one elongated metal member (18) and a matrix of a thermoplastic material (22) said thermoplastic material being extruded on said elongated metal member and said thermoplastic material being adherable to said plastic coating of said canvas, characterized in that said elongated metal member has been coated with a primer layer (20) before said thermoplastic material is extruded on the coated metal member to realize an adhesion between said thermoplastic material and said elongated metal member.
2. A strip according to claim [3] 1, whereby said primer layer comprises a thermosetting material.
3. A strip according to claim [4] 2, whereby said thermosetting material is selected from the group consisting of acrylate based resins, epoxy based resins or alkyd based resins.
4. A strip according to claim [3.] 1, whereby said primer layer comprises a hot melt.
7. A strip according to [anyone of the preceding claims] claim 1, whereby said thermoplastic material is polyvinylchloride.
8. A strip according to [anyone of the preceding claims] claim 1, whereby said thermoplastic material is a polyvinylchloride compound.
9. A strip according to [anyone of the preceding claims] claim 1, whereby said metal member is a flat wire with a tensile strength greater than 1500 N/mm².
10. A strip according to [anyone of the preceding claims] claim 1, whereby said metal member is a flat wire with a tensile strength greater than 1700 N/mm².

11. A strip according to [anyone of the preceding claims] claim 1, whereby said metal member is a flat wire with a thickness of less than 0.35 mm.
12. A strip according to [anyone of claims 1 to 8] claim 1, whereby said metal member is a wire with a rounded I-profile.
13. A strip according to [anyone of the preceding claims] claim 1, whereby said metal member is a steel wire with a carbon content of at least 0.40%.
14. A strip according to [anyone of the preceding claims] claim 1, whereby said metal member comprises at least two metal members.
15. A strip according to claim 14, whereby the metal members are located parallel in the plane of the strip, each metal member being in contact with [a] at least one other metal member.
16. A strip according to [anyone of the preceding claims] claim 1, whereby the metal member is coated with a zinc layer or with a zinc alloy layer.
17. A fabric (10) for reinforcement of canvasses having a plastic coating, said fabric comprising a warp (12) and a weft (14), at least one of the warp or the weft being formed by a strip [according to anyone of claims 1 to 16] according to claim 1.
18. A fabric according to claim 1, whereby both the warp and the weft are formed by said strip.
19. Use of a strip according to [anyone of claims 1 to 16] claim 1, for reinforcement of a canvass.
20. Use of a fabric according to [claims 17 or 18] claim 17 for reinforcement of a canvass.

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JC18 Rec'd PCT/PTO 31 JUL 2001

WO 00/55419

PCT/EP00/01900

Canvasses reinforced with metal members

Field of the invention.

5 The present invention relates to a fabric and to a strip for the reinforcement of canvasses having a plastic coating.

The invention also relates to the use of a fabric and a strip for the reinforcement of canvasses having a plastic coating.

Background of the invention.

10 Canvasses with a plastic coating are for example used to cover the loads on vehicles or containers, they are also used as tent material.

Such canvasses must meet several requirements.

15 They must be sufficient strong to avoid tearing due to movement of the load and simultaneously they must be sufficient flexible so that the canvasses can be easily and quickly slid to one side to open them.

A further requirement is that they must give a good protection against vandalism and robbery. Therefore a high resistance against the action of a knife or against the action of a pair of scissors is required.

20 Since the weight of the canvass limits the amount of load that may be transported by the vehicle or container, the weight of the canvass must be as low as possible.

WO 98/55682 describes a fabric for the reinforcement of canvasses.

25 This reinforcement consists of strips comprising a thermoplastic matrix and several parallel metal members.

This gives a good flexibility and a rather good resistance against the action of a knife or a cutter. The resistance against the action of a pair of scissors achieved by this embodiment is not always sufficient.

30

Summary of the invention.

It is an object of the invention to provide a fabric for the reinforcement of canvasses having an improved resistance against the action of a knife or a cutter and against the action of a pair of scissors or a pair of shears.

35 It is a second object to provide a fabric with a good corrosion resistance.

It is a further object to provide a fabric with a low weight.

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-2-

According to one aspect of the invention, there is provided a fabric for the reinforcement of canvasses, having a plastic coating.

The fabric comprises a warp and a weft. At least one of the warp or the weft is formed by a strip comprising at least one elongated metal member and a matrix of a thermoplastic material. The thermoplastic material is adherable to the plastic coating of the canvas. A primer layer is applied on the metal member before the thermoplastic material is applied on said coated metal member to realise a good adhesion between the thermoplastic material and the metal member.

The strips have a cross-sectional thickness ranging from 0.5 mm to 3 mm and a cross-sectional width ranging from 3 mm to 25 mm, preferably the thickness is between 0.5 mm and 2 mm and the width is between 3 mm and 15 mm.

The strips forming the warp and the strips forming the weft form meshes with a maximum dimension ranging from 5 cm to 30 cm. The dimension of these meshes can be adapted to the kind of goods that has to be transported. In most cases a maximum dimension of about 7 cm to 15 cm is preferred.

The strips forming the weft can be welded to the strips forming the warp or they can be fixed to each other by means of an adhesive.

According to a second aspect of the invention, there is provided a strip for reinforcement of canvasses having a plastic coating.

The strip comprises at least one elongated metal member and a matrix of a thermoplastic material. The thermoplastic material is adherable to the plastic coating of the canvas. A primer layer is applied on the metal member. This primer layer is required to obtain a good adhesion of the thermoplastic material to the metal member. Such a primer layer is applied on the surface of the metal member before the application of the thermoplastic material.

When no primer layer is applied, the wire could be pulled out the strip without difficulties.

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Further, without the application of such a primer layer, the thermoplastic material, such as PVC (polyvinylchloride) flows away during the welding of the strip on the canvass. In this case the metal member is not longer surrounded by the matrix material after the welding. This would result in a fabric which is susceptible of corrosion.

Preferably, the primer layer maintains its adhesion characteristics even if the material is subjected to a heat treatment, for example during the welding of the strips on the canvass.

Therefore, the primer layer preferably withstand a heat treatment during some minutes, for example 5 minutes at 150 °C without losing its characteristics.

The application of a primer layer on the metal further allows it to reduce the thickness of layer of the thermoplastic material. This is of great importance since the amount of thermoplastic material used, has a direct influence on the weight of the reinforced canvass. As described before, it is desirable that the weight of the canvass is as low as possible.

The metal member must give the strip the required strength but must also enable the strip to remain sufficient flexible, preferably in all directions. The flexibility of the strip is strongly influenced by the type of metal member used to reinforce the strip.

The metal member is preferably a flat wire. Flat wire is flexible in the direction perpendicular to the flat side of the wire.

Since the flexibility is determined by the thickness of the wire, the wire is preferably less than 0.40 mm, more preferably less than 0.35 mm, for instance less than 0.30 mm.

Since the resistance against the action of a pair of scissors is increased when the tensile strength is high, a tensile strength of at least 1500 N/mm² is preferred, more preferably the tensile strength is greater than 1700 N/mm².

To obtain the desired tensile strength a carbon content greater than 0.40 % is preferred.

-4-

By preference, the wire is rounded off so that the cross section has no sharp corners, which could result in a damage of the canvass during welding.

5 Another metal member that can be used is a wire with a rounded I-profile. An I-profiled wire is a wire with a cross section resembling an I-shape. The thickness of the left end and the thickness of the right end are greater than the center thickness of the wire.

10 This wire has the same flexibility as a flat wire with a thickness equal to the center thickness of the I-profiled wire. The resistance against the action of a pair of scissors of this I-profiled wire is improved in comparison with this flat wire. This resistance equals the resistance of a flat wire with a thickness equal to the thickness of the broader left and right end of the I-profiled wire while the weight of such an I-profiled wire is reduced compared with this flat wire.

15 In another embodiment the metal member comprises at least two metal members. These metal members are preferably located parallel in the plane of the strip. The metal members could be round steel wires, square wires, rectangular wires or another type of wires. Each metal member is hereby in contact with at least one other metal member, so that they form together a kind of a flat wire.

20 The plurality of the elongated metal members gives the strip a good flexibility. The resistance against the action of a knife or against the action of a pair of scissors is remained because of the arrangement of the metal members forming a flat wire.

25 To improve the corrosion resistance of the fabric, the metal member or the metal members can be coated with a metallic coating layer such as zinc or a zinc alloy comprising 2 to 10 % Al and 0.1 to 0.4 % of a rare earth element such as La and/or Ce.

30 A thermoplastic material such as PVC (polyvinylchloride) is applied on the metal member. The application can be done by any conventional

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means. Preferred application methods are extrusion, fluidised bed coating or plastisol coating.

5 The adhesion of the primer to the wire surface is improved when the surface of the wire is clean. Therefore, it can be desirable to degrease the wire surface before applying the primer layer.

10 The application of the primer layer may be done by any conventional means.

15 A first group of primers that can be used are thermosetting materials. Binding agents are thereby dissolved in an organic solvent or are dispersed with a limited amount of a dispersing agent in water to form an emulsion or a suspension.

Suitable binding agents are based on acrylate, alkyd/melamine, epoxy or fenol/epoxy resins. Other binding agents giving a good adhesion to the metal and to the PVC compounds can also be used.

Additives such as anticorrosion pigments, wetting agents and/or stabilising agents can be added.

20 The primer composition is applied to the metal by immersing the wire into the solution, the emulsion or the suspension of the primer material; the primer composition can also be applied by spraying.

The thickness of the wet primer layer can be calibrated by passing the wire and the primer through the calibrated opening of a die.

25 Alternatively, the thickness of the primer layer can be calibrated by felt wiping or by air wiping in a controlled air stream.

The thickness of the primer layer may be influenced by further diluting the primer composition.

In order to allow drying and curing, the wire can be heated.

30 Since it is desirable that the weight of the canvass is as low as possible, the thickness of the primer layer must be low. The thickness of the dry primer layer is preferably less than 10 μm , more preferably less than 5 μm , for instance less than 1 μm .

35 Radiation curable resins such as ultra violet, electron beam or infra red curable resins are also suitable as primer.

5 A second group of primer layers that can be applied are hot melts, for example ethylene copolymers such as EVA (ethyl vinyl acetate), polyamides or polyesters. In order to obtain a sufficient thin layer, it is preferred to use hot melts with a viscosity at 200°C of less than 20 Pa.s, more preferably this viscosity is less than 15 Pa.s. This hot melt can be applied with a variety of different equipments. Very suitable is the melt pot. Also application by extrusion is possible under certain conditions. A method for the application by extrusion is described in the patent specification BE 1006346.

10 Depending on the viscosity and the method of the application of the primer layer, primer layers with a thickness of less than 25 µm, for instance less than 5 µm are obtained.

15 A third group are silane-compounds. One functional group of these coupling agents is responsible for the binding with the metal or metal oxides; the other functional group reacts with the polymer.

20 More details about these silane compound can be found in the PCT application with the application number PCT/BE98/0015. Usually the silane compounds are diluted in alcohols, although they can be diluted in other solvents or in water as well. With this type of compounds very thin primer layers with a thickness of 20 nm or even less can be achieved.

25 The adhesion between the thermoplastic material and the metal member can be evaluated by carrying out the following test.

The PVC layer is removed in the longitudinal direction over about 5 cm by means of the sharp side of a knife. By means of the blunt side of the knife the PVC layer is slightly lifted. Finally, the synthetic coating is tried to be pulled off the metal member with the fingers.

30 The more difficult the PVC layer can be pulled off, the stronger the adhesion of the PVC to the metal member.

The test is carried out both on a wire on which a PVC layer is extruded directly and on a wire coated with a primer layer before the extrusion of the PVC layer.

5 The PVC coating, extruded directly on the metal member can be pulled off easily, while the removal of the PVC coating is much more difficult when a primer layer is applied on the metal member.

10 After the application of the primer layer on the metal member the thermoplastic material is applied on the metal member.

The thermoplastic material must give a good adhesion to the canvass. Since canvasses are usually coated with PVC, the thermoplastic material is preferably a PVC compound, although other thermoplastic materials with a good adhesion to PVC can be used as well.

15 Canvasses can also be made of polypropylene, polyethylene or of polyester. In these cases one chooses a thermoplastic material which gives a good adhesion to this polymers.

Brief description of the drawings.

20 The invention will now be described into more detail with reference to the accompanying drawings wherein

- FIGURE 1 shows a fabric according to the first aspect of the present invention.
- FIGURE 2, FIGURE 3 and FIGURE 4 show three strips
- 25 according to the second aspect of the present invention.

Description of the preferred embodiments of the invention.

Figure 1 shows an embodiment of a fabric according to the first aspect of the invention.

30 This fabric 10 comprises strips forming the warp 12 and strips forming the weft 14. The strips 12 and the strips 14 are welded to each other. The width W of the meshes is 7.5 cm, the height H of the meshes is 15 cm.

Figure 2 shows a strip 16 according to the second aspect of the invention.b

The strip comprises a hard rolled flat steel wire 18 of the type 4.00 x 0.30 mm, with a tensile strength, R_m of 1700 N/mm². The carbon content of the steel is equal to 0.70 %.

On this wire a primer 20 is applied. An alkyd/melamine resin is dissolved in a solvent such as benzene, xylene or in an alcohol. An anticorrosion pigment is added. The composition is about 30 % of the binding agent and about 70 % of the solvent. The primer is once diluted with acetone. After drying and curing a primer layer with a thickness between 0.8 and 2.5 μ m is obtained.

The strip comprises PVC as matrix material 22. This PVC material is applied by extrusion.

The width of the strip equals to 6.00 mm, the thickness is 0.80 mm.

Figure 3 shows another strip 16, comprising a rounded I-profile wire 18'. The wire has a tensile strength, R_m of 1750 N/mm² and a carbon content of 0.80 %. The wire has a width of 4.00 mm. The center thickness is 0.30 mm and the thickness at the left and the right end equals 0.45 mm. This wire has the flexibility of a flat wire with a thickness of 0.30 mm and the resistance against the action of a pair of scissors of a flat wire with a thickness of 0.45 mm.

A primer 20 is applied on this wire. The following composition of the primer is used : about 30 % fenol/epoxy resin, 8 to 10 % alcohol, 2.5 % diethanolamine in water. The thickness of the primer layer after drying and curing ranges between 1 and 4 μ m.

The strip comprises PVC as matrix material 22. The PVC is applied by fluidised bed coating. The strip 16 has at least on one side a flat surface.

The width of the strip is 6.00 mm, the thickness is 0.90 mm.

Figure 4 shows another embodiment of a strip 16 comprising four round steel wires 18'' with a diameter of 0.40 mm.

These wires are located parallel in the plane of the strip 16. Each wire is hereby in contact with his neighbor or neighbors.

-9-

The tensile strength R_m of the wire equals 2550 N/mm^2 ; the carbon content is 0.80 %.

A primer layer is applied on the wires. The strip comprises PVC as matrix material 22. The strip has at least on one side a flat surface.

5 The width of the strip is 5.00 mm, the thickness is 0.80 mm.

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CLAIMS

- 5 1. A fabric (10) for reinforcement of canvasses having a plastic coating, said fabric comprising a warp (12) and a weft (14), at least one of the warp or the weft being formed by a strip which comprises at least one elongated metal member (18) and a matrix of a thermoplastic material (22) adherable to the plastic coating of the canvasses, characterised in that said elongated metal member has been coated with a primer layer (20) before said thermoplastic material is applied on the coated metal member to realise an adhesion between said thermoplastic material and said elongated metal member.
- 10 2. A fabric according to claim 1, whereby both the warp and the weft are formed by said strip.
- 15 3. A strip (16) for reinforcement of canvasses having a plastic coating, said strip comprises at least one elongated metal member (18) and a matrix of a thermoplastic material (22) adherable to the plastic coating of the canvasses extruded on the metal member, characterised in that said elongated metal member has been coated with a primer layer (20) before said thermoplastic material is extruded on the coated metal member to realise an adhesion between said thermoplastic material and said elongated metal member.
- 20 4. A strip according to claim 3, whereby said primer layer comprises a thermosetting material.
- 25 5. A strip according to claim 4, whereby said thermosetting material is selected from the group consisting of acrylate based resins, epoxy based resins or alkyd based resins.
- 30 6. A strip according to claim 3, whereby said primer layer comprises a hot melt.
- 35

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7. A strip according to claim 6, whereby said hot melt is selected from the group consisting of ethylene copolymers, polyamides or polyesters.
- 5 8. A strip according to claim 3, whereby said primer layer comprises a bifunctional silane compound.
9. A strip according to anyone of claims 3 to 8, whereby said thermoplastic material is polyvinylchloride.
- 10 10. A strip according to anyone of claims 3 to 8, whereby said thermoplastic material is a polyvinylchloride compound.
11. A strip according to anyone of claims 3 to 10, whereby said metal member is a flat wire with a tensile strength greater than 1500 N/mm².
- 15 12. A strip according to anyone of claims 3 to 10, whereby said metal member is a flat wire with a tensile strength greater than 1700 N/mm².
- 20 13. A strip according to anyone of claims 3 to 12, whereby said metal member is a flat wire with a thickness of less than 0.35 mm.
- 25 14. A strip according to anyone of claims 3 to 10, whereby said metal member is a wire with a rounded I-profile.
15. A strip according to anyone of claims 3 to 14, whereby said metal member is a steel wire with a carbon content of at least 0.40 %.
- 30 16. A strip according to anyone of claims 3 to 10, whereby said metal member comprises at least two metal members.

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-12-

17. A strip according to claim 16, whereby the metal members are located parallel in the plane of the strip, each metal member being in contact with a least one other metal member.

5 18. A strip according to anyone of claims 3 to 17, whereby said metal member is coated with a zinc layer or with a zinc alloy layer.

19. Use of a fabric according to claims 1 or 2 for reinforcement of a canvass.

10

20. Use of a strip according to anyone of claims 3 to 18 for reinforcement of a canvass.

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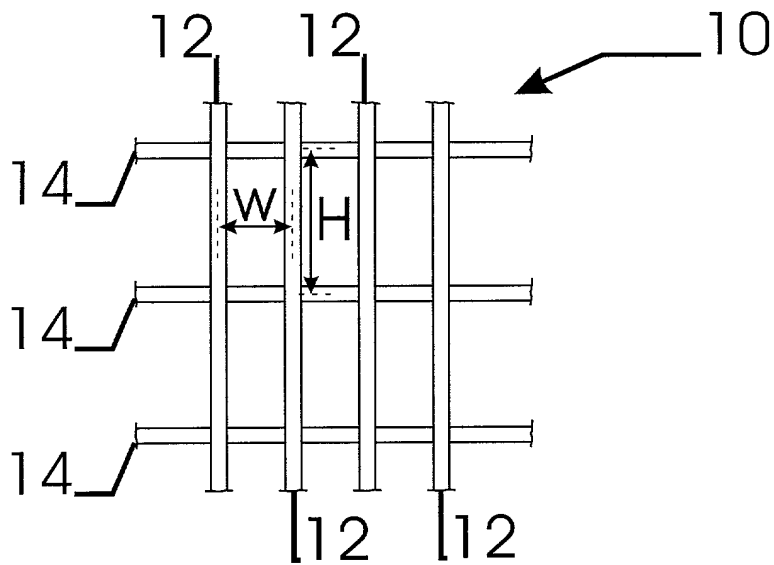


Fig. 1

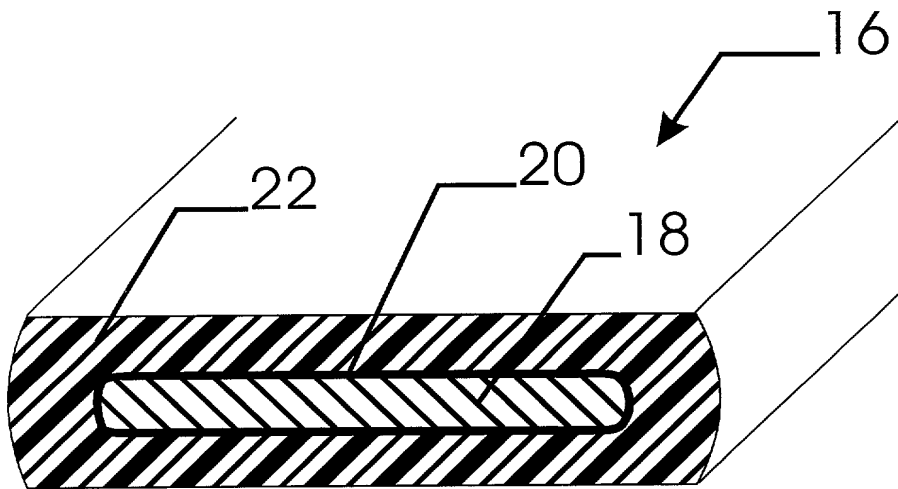


Fig. 2

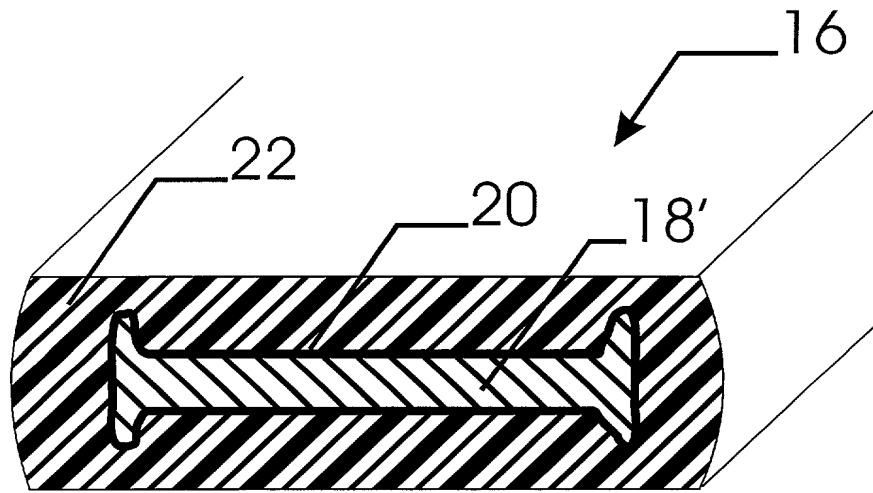


Fig. 3

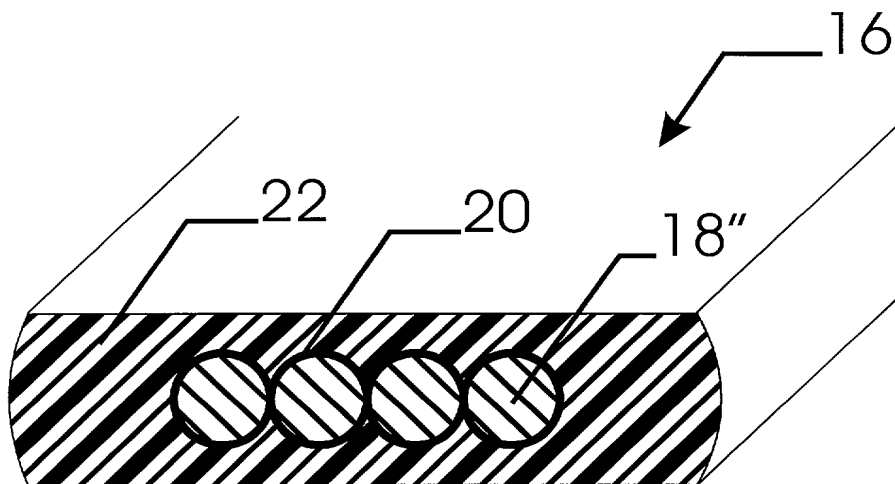


Fig. 4

DECLARATION AND POWER OF ATTORNEY

As a below named inventor, I HEREBY DECLARE:

THAT my residence, post office address, and citizenship are as stated below next to my name;

THAT I believe I am the original, first, and sole inventor (if only one inventor is named below) or an original, first, and joint inventor (if plural inventors are named below or in an attached Declaration) of the subject matter which is claimed and for which a patent is sought on the invention entitled

CANVASSES REINFORCED WITH METAL MEMBERS

(Attorney Docket No. 016782-0235)

the specification of which (check one)

 is attached hereto.

 X was filed on March 6, 2000 as United States Application Number or PCT International Application Number PCT/EP00/01900 and was amended on July 31, 2001 (if applicable).

THAT I do not know and do not believe that the same invention was ever known or used by others in the United States of America, or was patented or described in any printed publication in any country, before I (we) invented it;

THAT I do not know and do not believe that the same invention was patented or described in any printed publication in any country, or in public use or on sale in the United States of America, for more than one year prior to the filing date of this United States application;

THAT I do not know and do not believe that the same invention was first patented or made the subject of an inventor's certificate that issued in any country foreign to the United States of America before the filing date of this United States application if the foreign application was filed by me (us), or by my (our) legal representatives or assigns, more than twelve months (six months for design patents) prior to the filing date of this United States application;

THAT I have reviewed and understand the contents of the above-identified specification, including the claim(s), as amended by any amendment specifically referred to above;

THAT I believe that the above-identified specification contains a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention, and sets forth the best mode contemplated by me of carrying out the invention; and

THAT I acknowledge the duty to disclose to the U.S. Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, §1.56.

I HEREBY CLAIM foreign priority benefits under Title 35, United States Code § 119(a)-(d) or § 365(b) of any foreign application(s) for patent or inventor's certificate, or § 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below any foreign application for patent or inventor's certificate or of any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number	Country	Foreign Filing Date	Priority Claimed?	Certified Copy Attached?
99200806.0	Europe	March 16, 1999	YES	

I HEREBY CLAIM the benefit under Title 35, United States Code § 119(e) of any United States provisional application(s) listed below.

U.S. Provisional Application Number	Filing Date

I HEREBY CLAIM the benefit under Title 35, United States Code, § 120 of any United States application(s), or § 365(c) of any PCT international application designating the United States of America, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application.

U.S. Parent Application Number	PCT Parent Application Number	Parent Filing Date	Parent Patent Number

I HEREBY APPOINT the following registered attorneys and agents of the law firm of FOLEY & LARDNER:

STEPHEN A. BENT
DAVID A. BLUMENTHAL
BETH A. BURROUS
ALAN I. CANTOR
WILLIAM T. ELLIS
JOHN J. FELDHAUS
MICHAEL D. KAMINSKI
LYLE K. KIMMS
KENNETH E. KROSIN

24

Reg. No. 29,768
Reg. No. 26,257
Reg. No. 35,087
Reg. No. 28,163
Reg. No. 26,874
Reg. No. 28,822
Reg. No. 32,904
Reg. No. 34,079
Reg. No. 25,735

JOHNNY A. KUMAR	Reg. No. <u>34,649</u>
JACK LAHR	Reg. No. <u>19,621</u>
GLENN LAW	Reg. No. <u>34,371</u>
PETER G. MACK	Reg. No. <u>26,001</u>
STEPHEN B. MAEBIUS	Reg. No. <u>35,264</u>
BRIAN J. MC NAMARA	Reg. No. <u>32,789</u>
SYBIL MELOY	Reg. No. <u>22,749</u>
RICHARD C. PEET	Reg. No. <u>35,792</u>
GEORGE E. QUILLIN	Reg. No. <u>32,792</u>
ANDREW E. RAWLINS	Reg. No. <u>34,702</u>
BERNHARD D. SAXE	Reg. No. <u>28,665</u>
CHARLES F. SCHILL	Reg. No. <u>27,590</u>
RICHARD L. SCHWAAB	Reg. No. <u>25,479</u>
MICHELE M. SIMKIN	Reg. No. <u>34,717</u>
HAROLD C. WEGNER	Reg. No. <u>25,258</u>

to have full power to prosecute this application and any continuations, divisions, reissues, and reexaminations thereof, to receive the patent, and to transact all business in the United States Patent and Trademark Office connected therewith.

I request that all correspondence be directed to:

Glenn Law
FOLEY & LARDNER
Washington Harbour
3000 K Street, N.W., Suite 500
Washington, D.C. 20007-5109

Telephone: (202) 672-5426
 Facsimile: (202) 672-5399

I UNDERSTAND AND AGREE THAT the foregoing attorneys and agents appointed by me to prosecute this application do not personally represent me or my legal interests, but instead represent the interests of the legal owner(s) of the invention described in this application.

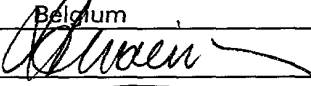
I FURTHER DECLARE THAT all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Name of first inventor 1-DE Ludo ADRIAENSEN

Residence Deerlijk, Belgium

Citizenship BELGIUM BEX

Post Office Address Bottenhoek 14
B-8540 Deerlijk
Belgium

Inventor's signature 

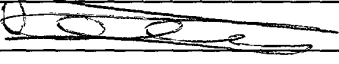
Date 27.08.01

Name of second inventor 200 Gerard VANDEWALLE

Residence Deerlijk, Belgium

Citizenship Belgium BEX

Post Office Address Oliebergstraat 46
B-8540 Deerlijk
Belgium

Inventor's signature 

Date 27/08/2001

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